



Contents

Getting Started

Getting Started	1-1
This Manual	1-1
Setting Up Remote Communications	1-4

Syntax and Commands

Command Syntax	2-1
Command and Query Structure	2-1
Clearing the Digitizing Oscilloscope	2-4
Command Entry	2-4
Constructed Mnemonics	2-6
Argument Types	2-8
Syntax Diagrams	2-10
Command Groups	2-11
Acquisition Commands	2-11
Alias Commands	2-11
Application Menu Commands	2-12
Calibration and Diagnostic Commands	2-12
Cursor Commands	2-13
Display Commands	2-14
Graphics Commands	2-15
Hard Copy Commands	2-16
Horizontal Commands	2-16
Limit Test Commands	2-17
Measurement Commands	2-18
Miscellaneous Commands	2-20
Save and Recall Commands	2-21
Status and Error Commands	2-22
Trigger Commands	2-23
Vertical Commands	2-24
Waveform Commands	2-24
Zoom Commands	2-29
Command Descriptions	2-31

Status and Events

Status and Events	3-1
Registers	3-1
Queues	3-5
Event Handling Sequence	3-6
Synchronization Methods	3-7
Messages	3-13

Programming Examples

Programming Examples	4-1
Compiling the Example Programs	4-2

Appendices

Appendix A: Character Charts	A-1
Appendix B: Reserved Words	B-1
Appendix C: Interface Specifications	C-1
GPIB Function Subsets	C-1
Interface Messages	C-2
Appendix D: Factory Initialization Settings	D-1

Glossary and Index



List of Figures

Figure 1-1: Common Message Elements	1-1
Figure 1-2: Functional Groupings and an Alphabetical List of Commands	1-2
Figure 1-3: Service Requests (SRQ's) Provide for Event (Interrupt) Driven Programs	1-2
Figure 1-4: The Disks That Accompany This Manual	1-3
Figure 1-5: GPIB Connector Location	1-4
Figure 1-6: How to Stack GPIB Connectors	1-5
Figure 1-7: Typical GPIB Network Configurations	1-6
Figure 1-8: Selecting the I/O System in the Main Menu	1-6
Figure 1-9: Selecting the GPIB Address in the GPIB Configuration Side Menu	1-7
Figure 2-1: Command Message Elements	2-2
Figure 2-2: Block Argument Example	2-9
Figure 2-3: Typical Syntax Diagrams	2-10
Figure 2-4: Message Window Coordinates	2-179
Figure 3-1: The Standard Event Status Register (SESR)	3-1
Figure 3-2: The Status Byte Register (SBR)	3-2
Figure 3-3: The Device Event Status Enable Register (DESER)	3-3
Figure 3-4: The Event Status Enable Register (ESER)	3-4
Figure 3-5: The Service Request Enable Register (SRER)	3-4
Figure 3-6: Status and Event Handling Process	3-6
Figure 3-7: Command Processing Without Using Synchronization ..	3-8
Figure 3-8: Processing Sequence With Synchronization	3-8
Figure 4-1: Equipment Needed to Run the Example Programs	4-1



List of Tables

Table 2-1: BNF Symbols and Meanings	2-1
Table 2-2: Command Message Elements	2-2
Table 2-3: Comparison of Header Off and On Responses	2-3
Table 2-4: Acquisition Commands	2-11
Table 2-5: Alias Commands	2-11
Table 2-6: Application Menu Commands	2-12
Table 2-7: Calibration and Diagnostic Commands	2-13
Table 2-8: Cursor Commands	2-13
Table 2-9: Display Commands	2-14
Table 2-10: Graphics Commands	2-15
Table 2-11: Hard Copy Commands	2-16
Table 2-12: Horizontal Commands	2-16
Table 2-13: Limit Test Commands	2-17
Table 2-14: Measurement Commands	2-18
Table 2-15: Miscellaneous Commands	2-20
Table 2-16: Save and Recall Commands	2-21
Table 2-17: Status and Error Commands	2-22
Table 2-18: Trigger Commands	2-23
Table 2-19: Vertical Commands	2-24
Table 2-20: Waveform Commands	2-27
Table 2-21: Zoom Commands	2-29
Table 2-22: Commands that Affect BUSY? Response	2-52
Table 2-23: Calibration Error Codes	2-53
Table 2-24: DATA and WFMPre Parameter Settings	2-83
Table 2-25: XY Format Pairs	2-101
Table 2-26: Commands that Generate an Operation Complete Message	2-182
Table 2-27: Additional WFMPre Commands	2-219
Table 3-1: SESR Bit Functions	3-2
Table 3-2: SBR Bit Functions	3-3
Table 3-3: No Event Messages	3-13
Table 3-4: Command Error Messages—CME Bit 5	3-13
Table 3-5: Execution Error Messages—EXE Bit 4	3-14
Table 3-6: Device Error Messages—DDE Bit 3	3-17
Table 3-7: System Event Messages	3-17
Table 3-8: Execution Warning Messages—EXE Bit 4	3-18
Table 3-9: Internal Warning Messages	3-19